CHEMICAL HERITAGE FOUNDATION

DIMITAR B. NIKOLOV

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Karen A. Frenkel

at

Weill Medical College of Cornell University
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on

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DIMITAR B. NIKOLOV

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Education

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Selected Publications

Albermann C, Soriano A, Jiang J, Vollmer H, Biggins JB, Barton WA, Lesniak J, Nikolov DB, Thorson JS. Substrate specificity of NovM: implications for novobiocin biosynthesis and glycorandomization. Org Lett. 2003;5:933-936.

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Barton WA, Liu BP, Tzvetkova D, Jeffrey PD, Fournier AE, Sah D, Cate R, Strittmatter SM, Nikolov DB. Structure and axon outgrowth inhibitor binding of the Nogo-66 receptor and related proteins. EMBO J. 2003 ;22:3291-3302.

ABSTRACT

Dimitar B. Nikolov grew up in Sofia, Bulgaria, the only child of a mother who is still a chemist and a father who was an electrical engineer. His paternal grandparents lived with them and cared for Nikolov while his parents worked. Nikolov often accompanied his mother to her lab, and he feels that he is a scientist because of both genes and upbringing. He attended local schools (all schools in Bulgaria were public), which he thinks gave him a broader and better education than most American children get. He always liked physics and math classes and competed in national contests, doing so well that he did not have to take the entrance exam required of everyone else and could go to whatever school he chose.

He enrolled in the biotechnology program at Sofia University partly to avoid compulsory military service, as permitted by the higher educational system in Bulgaria, and he finished master's degrees in both physics and biology. He worked in Peter Antonov's laboratory on plant membrane fusion for his degree in biology. During college he also met and married his wife, who was in the same program.

After the fall of the Berlin Wall it became easier for Nikolov to attend a foreign university, and since the majority of good papers were from the United States, he decided to apply to a PhD program here. He chose Rockefeller University at first for neuroscience, but he changed his mind, switching to structural biology and working on transcription proteins in Steven Burley's lab. He describes the graduate program at Rockefeller; Burley's laboratory; a typical day in graduate school; and the process of doing x-ray crystallography. He talks about his graduate work on the structure of the TATA box transcription initiation elements. Meanwhile, his wife had paused her PhD studies to have their first child and then, nine years later, their second. She has since become manager of a lab at Rockefeller.

After finishing his PhD, Nikolov decided against a postdoc and accepted a very good offer of a faculty position at Sloan-Kettering Institute. He talks about setting up his lab, its make-up, and his management style. His research has focused on axon guidance molecules in early development, for which he hopes to find practical applications. Nikolov discusses his funding history, the impact of the Pew Scholars Program in the Biomedical Sciences grant on his research, and his belief that collaboration between academia and industrial science is important. He explains his grant-writing process, some of his professional duties and teaching responsibilities, and goes into detail about his current research in structural biology on angiopoietic receptors and ligands. He tells how he writes journal articles, how he sets his research agenda, what he thinks of competition in science, and his thoughts on how the national scientific agenda should be set.

Nikolov continues with more insight into his views on improving science education in the United States and the role of the scientist in increasing public interest in science. He concludes his interview with a discussion of his professional goals and his future research on cell signaling and communication in neural development.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Karen A. Frenkel, Interviewer, UCLA Oral History Program; B.A., Hampshire College, 1978; M.S., Boston University, 1982

TIME AND SETTING OF INTERVIEW:

Place: Dimitar B. Nikolov's office at Weill Medical College of Cornell University

Total number of recorded hours: 5

Persons present during interview: Nikolov and Frenkel.

CONDUCT OF INTERVIEW:

This interview is one in a series with Pew Scholars in the Biomedical Sciences conducted by the UCLA Oral History Program in conjunction with the Pew Charitable Trusts' Pew Scholars in the Biomedical Sciences Oral History and Archives Project. The project has been designed to document the backgrounds, education, and research of biomedical scientists awarded four-year Pew scholarships since 1988.

To provide an overall framework for project interviews, the director of the UCLA Oral History Program and three UCLA faculty project consultants developed a topic outline. In preparing for this interview, Frenkel held a telephone pre-interview conversation with Nikolov to obtain written background information (curriculum vitae, website address, copies of published articles, etc.) and agree on an interviewing schedule. She also reviewed the documentation in Nikolov's file at the Pew Scholars Program office in San Francisco, including his proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members.

ORIGINAL EDITING

Carol Squires edited the interview. She checked the verbatim transcript of the interview against the original tape recordings, edited for punctuation, paragraphing, and spelling, and verified proper names. Words and phrases inserted by the editor have been bracketed.

Nikolov did not review the transcript. Consequently, some proper names and other information remain unverified.

Carol Squires prepared the table of contents. Technitype Transcribing compiled the guide to proper names.

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